

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,868,651 B1
APPLICATION NO. : 09/660404
DATED : March 22, 2005
INVENTOR(S) : Sorensen

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete Title page illustrating a figure(s), and substitute therefor, new Title page illustrating a figure(s). (attached)

Delete drawing sheets 1-10, and substitute therefor drawing sheets 1-10. (attached)

Signed and Sealed this

Twelfth Day of February, 2008



JON W. DUDAS
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Sorensen

(10) Patent No.: **US 6,868,651 B1**
(45) Date of Patent: **Mar. 22, 2005**

(54) **PACKER APPARATUS, PACKING CONVEYOR AND METHOD**

(76) Inventor: Ejler I. Sorensen, 15 Westchester Blvd, Bolton, Ontario (CA), L7E 5Y1

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 474 days.

(21) Appl. No.: 09/660,404

(22) Filed: Sep. 12, 2000

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(52) U.S. Cl. 53/247; 294/119.1; 294/87.1

(58) Field of Search 53/443, 147, 531, 53/542, 247; 211/124; 294/119.1, 87.26, 87.1; 493/473, 479; 269/43, 45, 258; 29/281.1

(56) References Cited

U.S. PATENT DOCUMENTS

- | | | |
|-------------|--------------------------|-----------------|
| 3,166,207 A | • 1/1965 Quayle | 414/621 |
| 3,893,574 A | • 7/1975 Kamphues | 294/63.1 |
| 3,910,622 A | • 10/1975 Nies | 294/87.2 |
| 4,120,526 A | • 10/1978 Rohner | 294/87.1 |
| 4,211,036 A | • 7/1980 Birk | 53/543 |
| 4,750,132 A | • 6/1988 Pessina et al. | 414/751.1 |
| 5,127,695 A | • 7/1992 Zoeten | 294/67.33 |
| 5,186,515 A | • 2/1993 Goldberg et al. | 294/119.1 |
| 5,284,003 A | • 2/1994 Goodman et al. | 53/437 |

- | | | |
|--------------|------------------------|-----------------|
| 5,655,355 A | • 8/1997 Ramler | 53/475 |
| 5,942,188 A | • 8/1999 Lepper et al. | 422/62 |
| 6,135,435 A | • 10/2000 Schmitz | 269/164 |
| 6,135,704 A | • 10/2000 Seaberg | 414/791.6 |
| 6,196,536 B1 | • 3/2001 Hintze | 269/282 |
| 6,309,003 B1 | • 10/2001 Bertini | 294/119.1 |

* cited by examiner

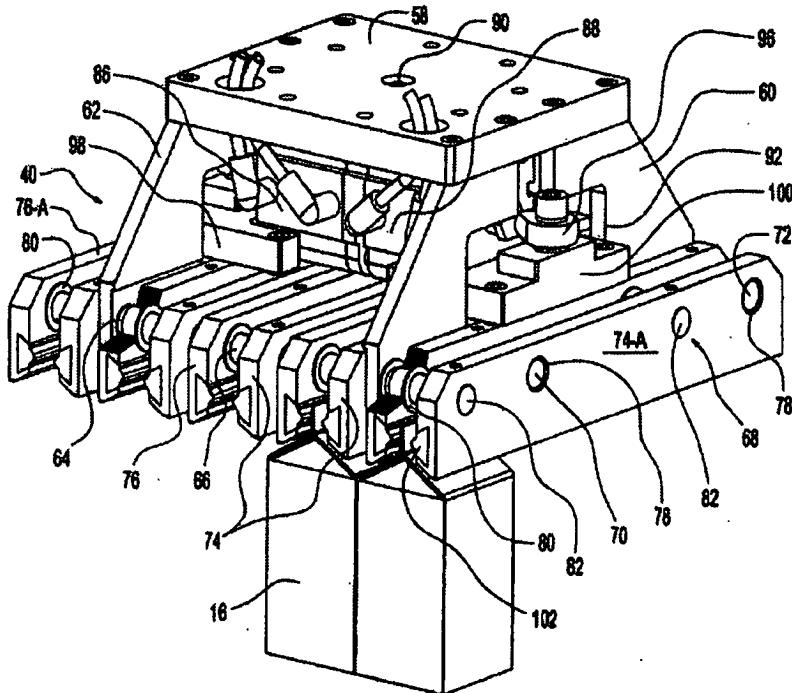
Primary Examiner—Eugene Kim

Assistant Examiner—John Paradiso

(57) **ABSTRACT**

A packer for packing cartons into boxes having at least one carton transfer location where cartons accumulate for transfer, a box packing location adjacent the transfer location, clamps for gripping the cartons in a group at the transfer location, the clamps being movable for moving the gripped group of cartons from the transfer location to the packing location, and, being releasable for depositing the group of cartons in the box at the packing location. Also disclosed is a carton gripper for gripping groups of cartons, moving the cartons and for packing the groups into boxes and having, a gripper body, slide rods supported on the gripper body, pairs of clamp bars slideable along the slide rods, and, the gripper being movable moving the pairs of clamp bars towards one another into a gripping position and away from one another into a releasing position. Also disclosed is a method of gripping a group of cartons and transferring them from a conveyor into a box.

10 Claims, 10 Drawing Sheets



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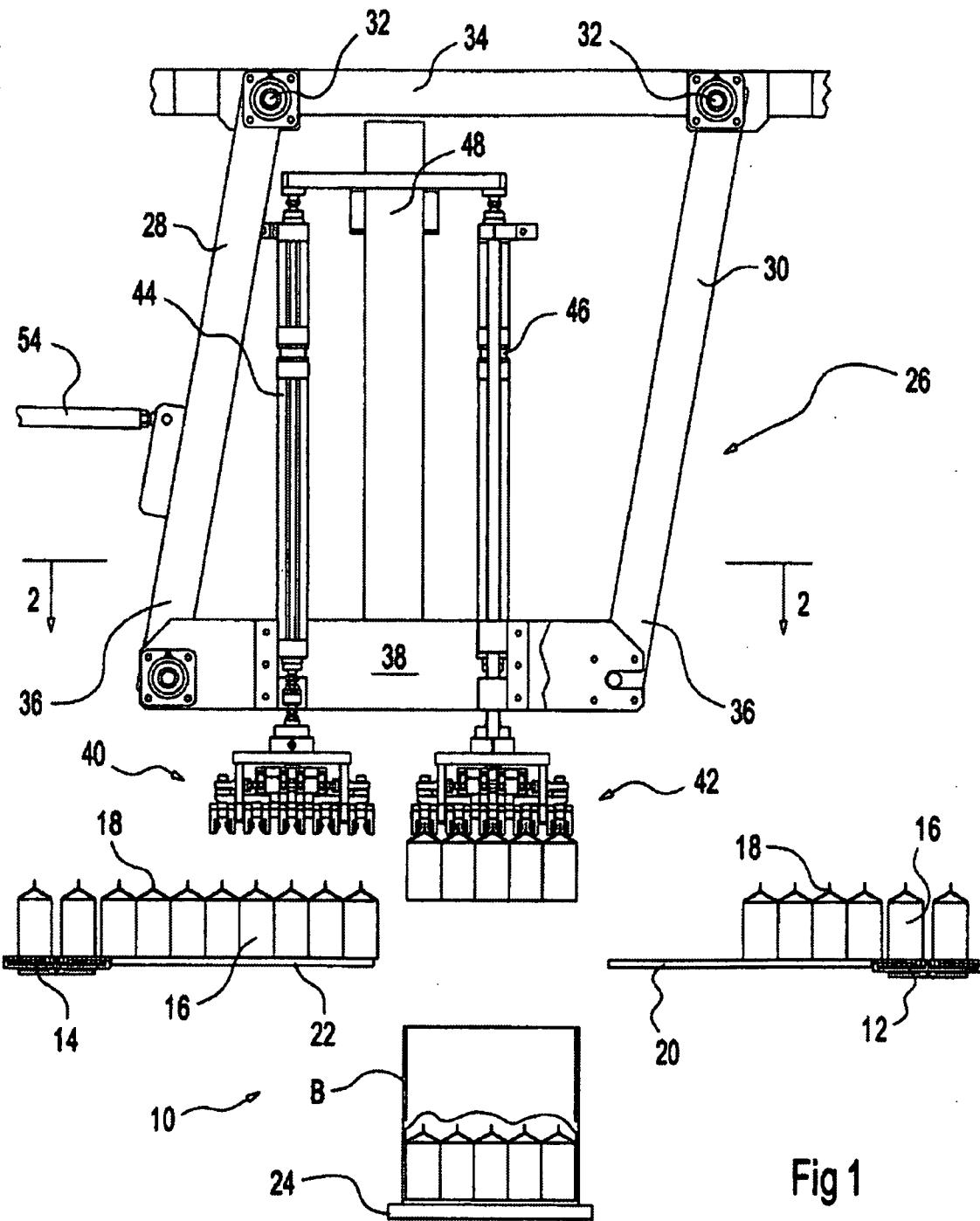


Fig 1

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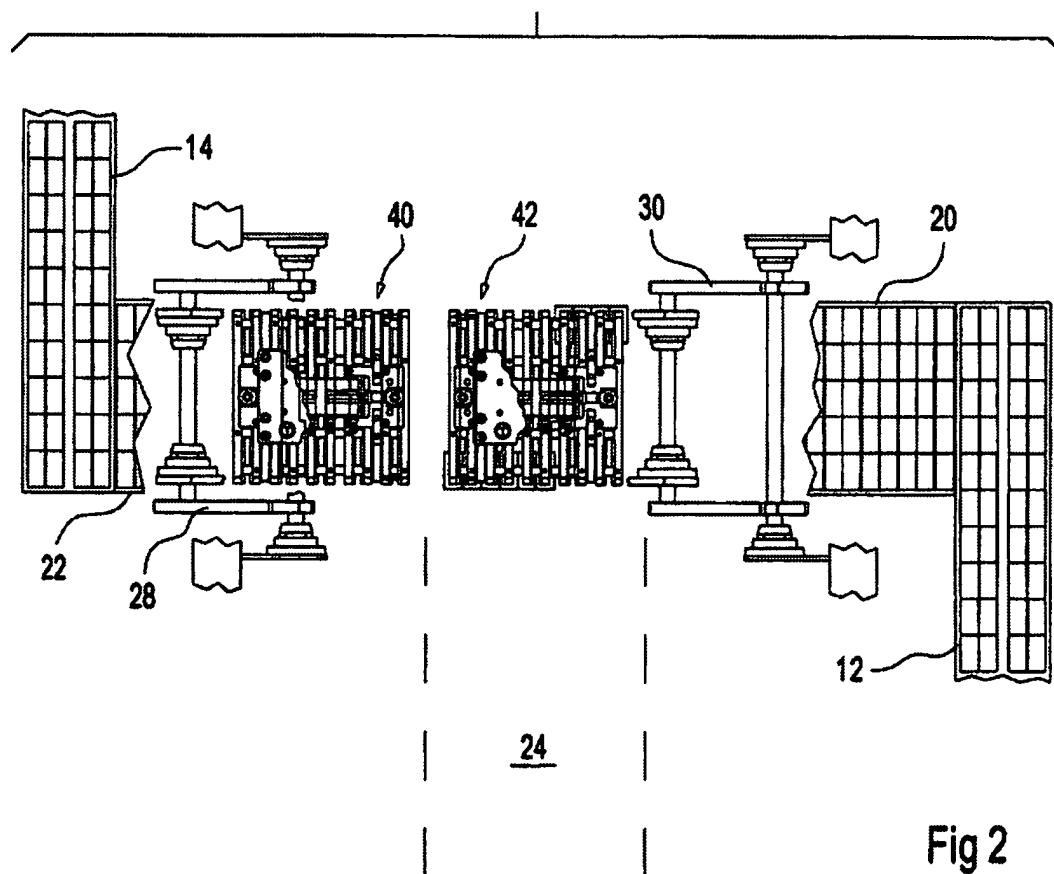


Fig 2

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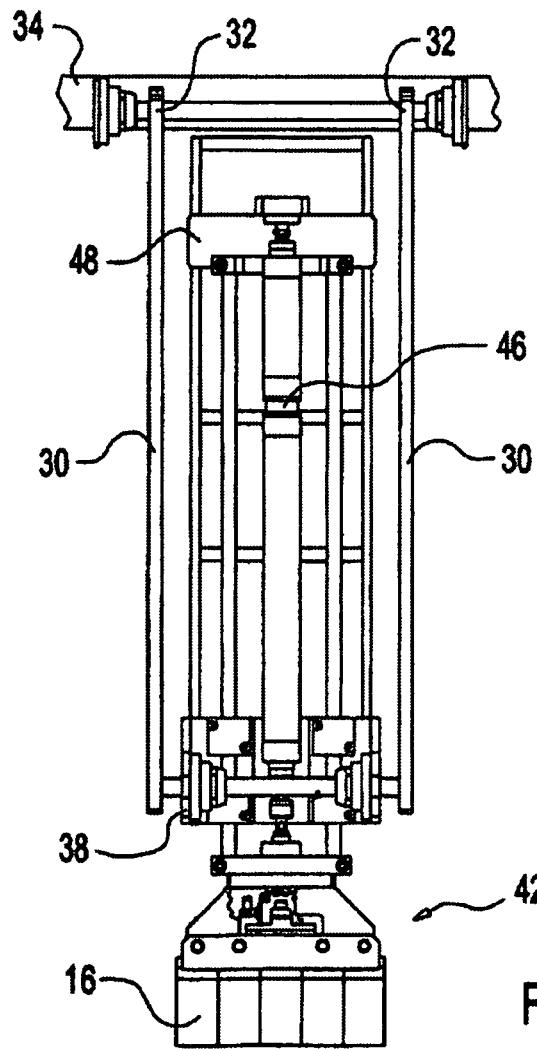
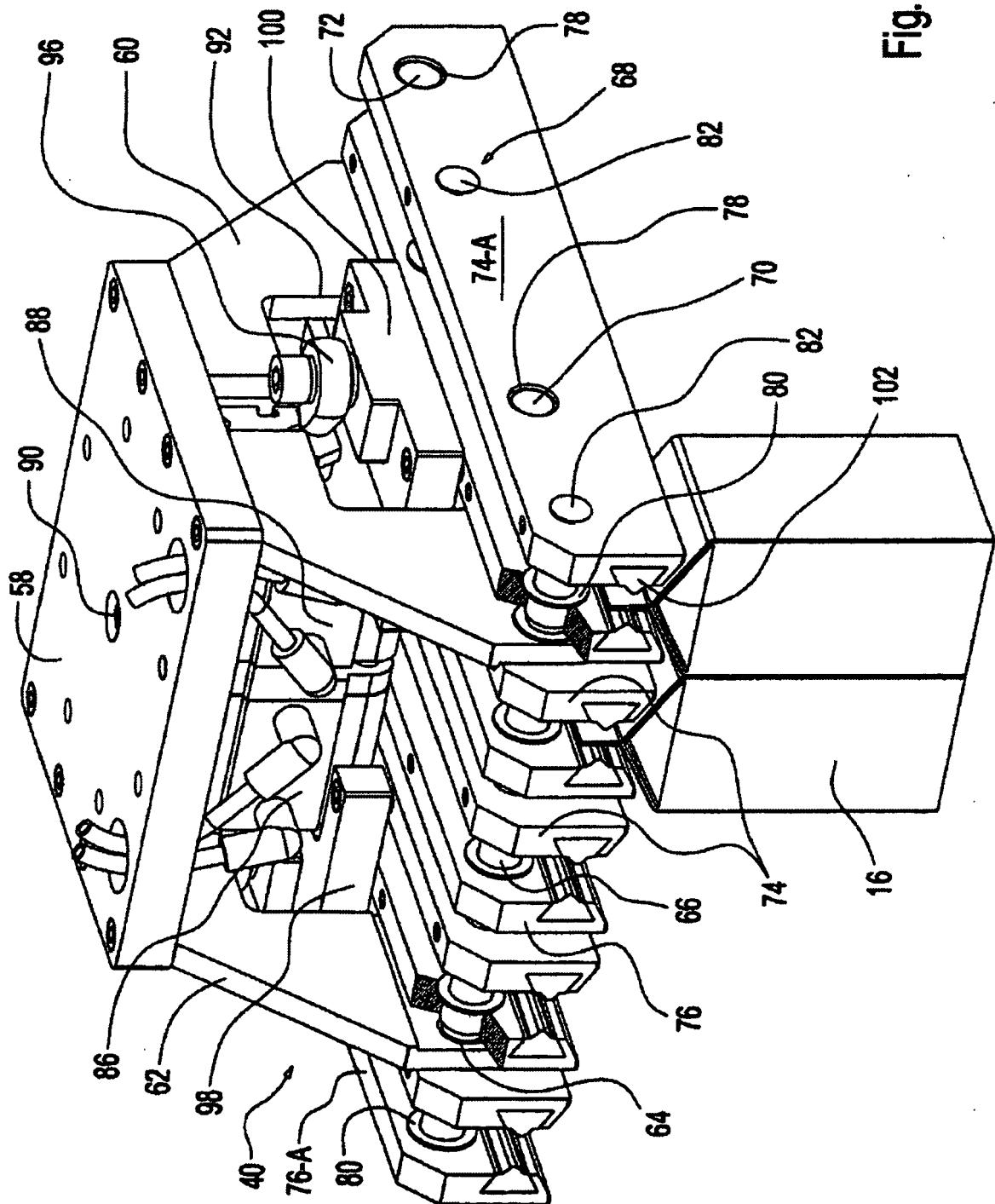


Fig 3

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6,868,651 B1**Fig. 4**

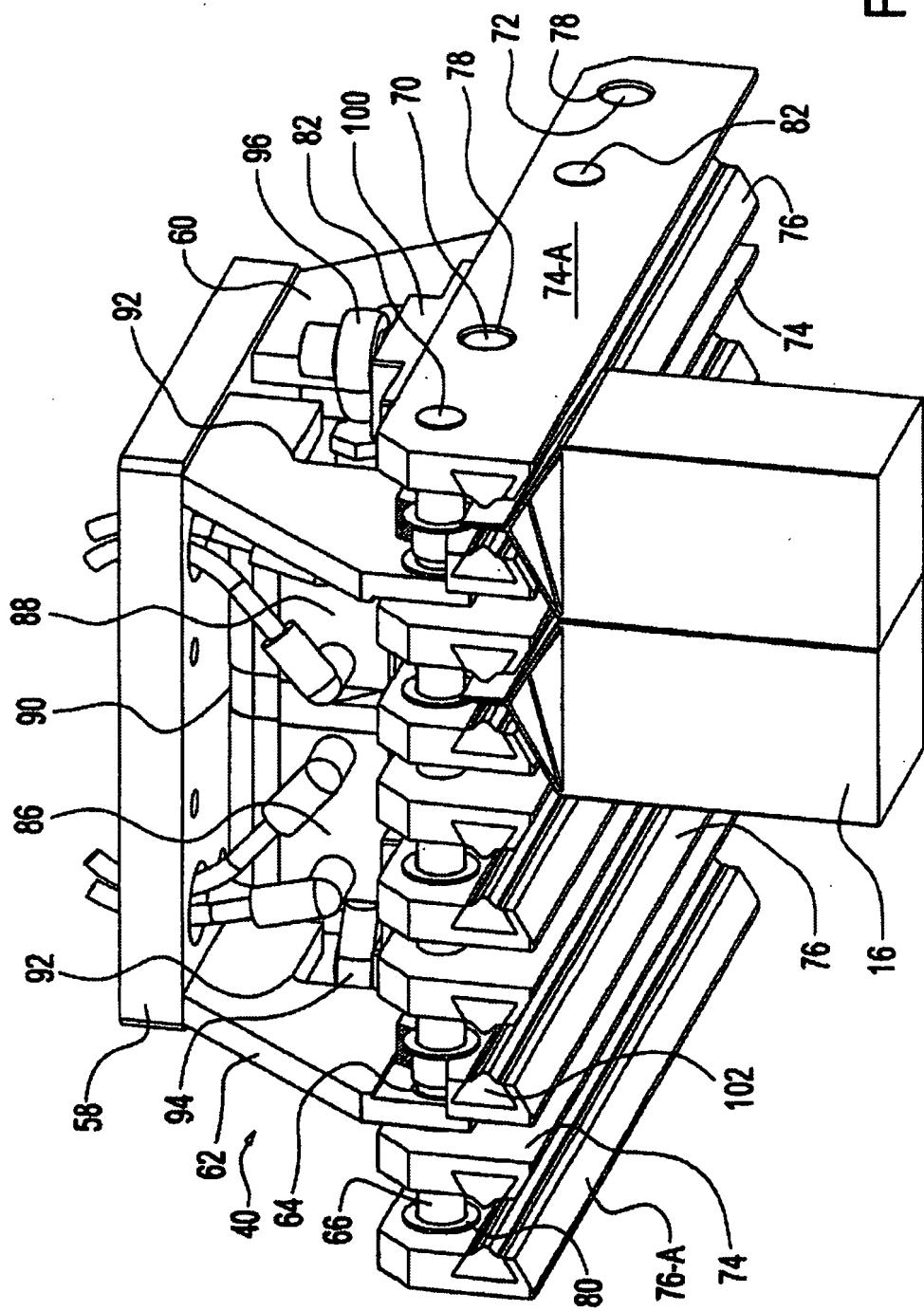
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Fig



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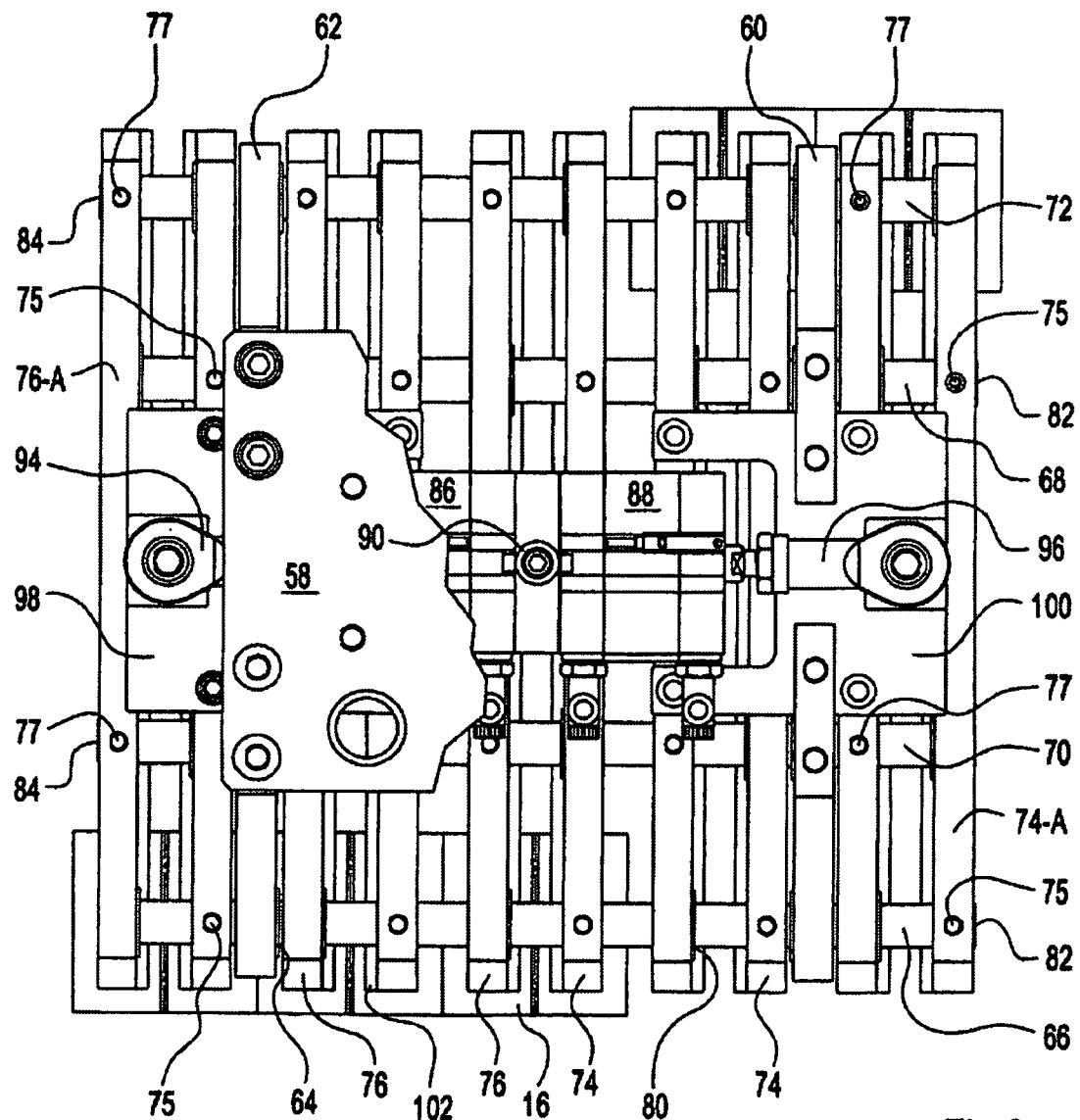
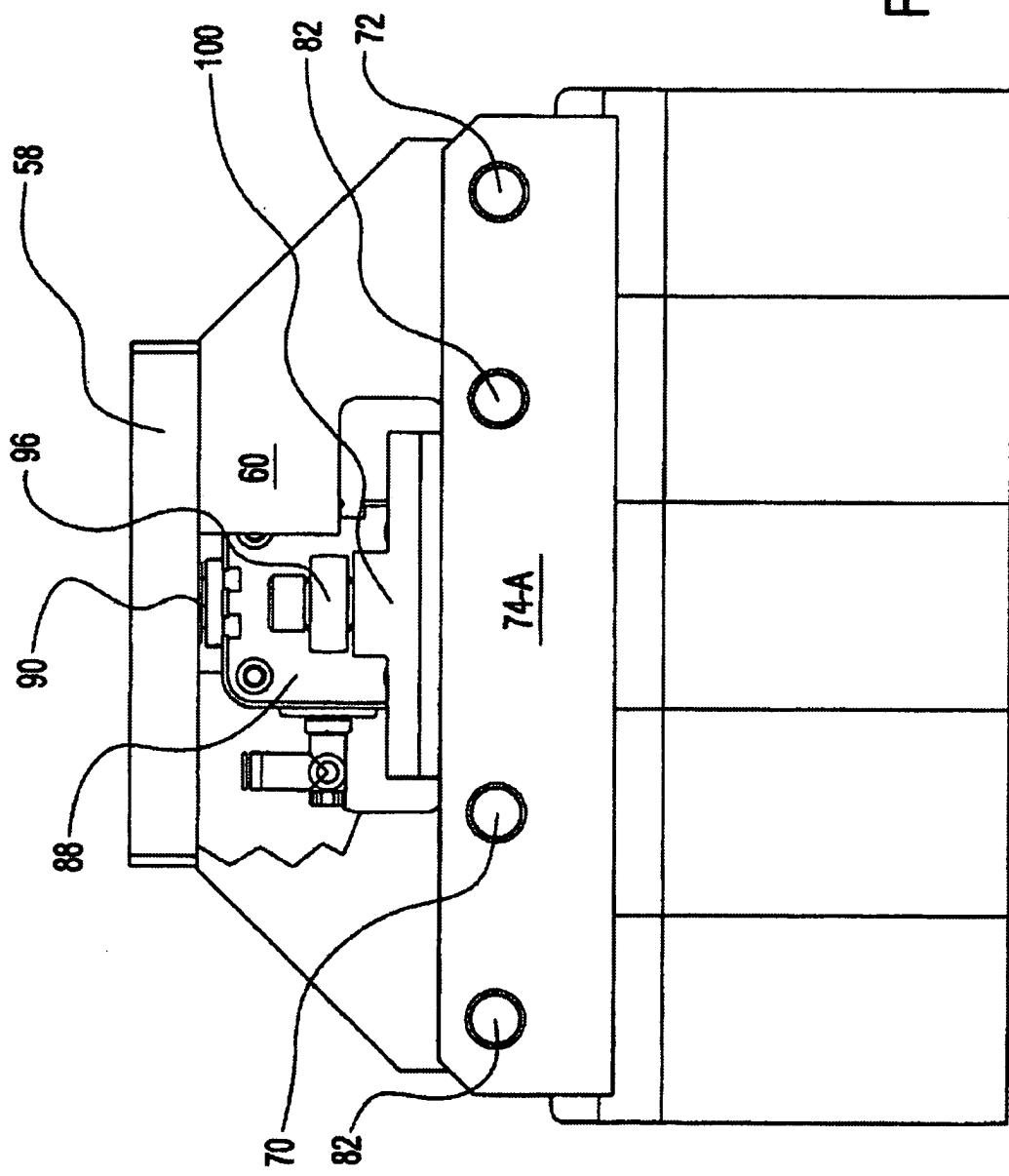


Fig 6

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6,868,651 B1**Fig 7**

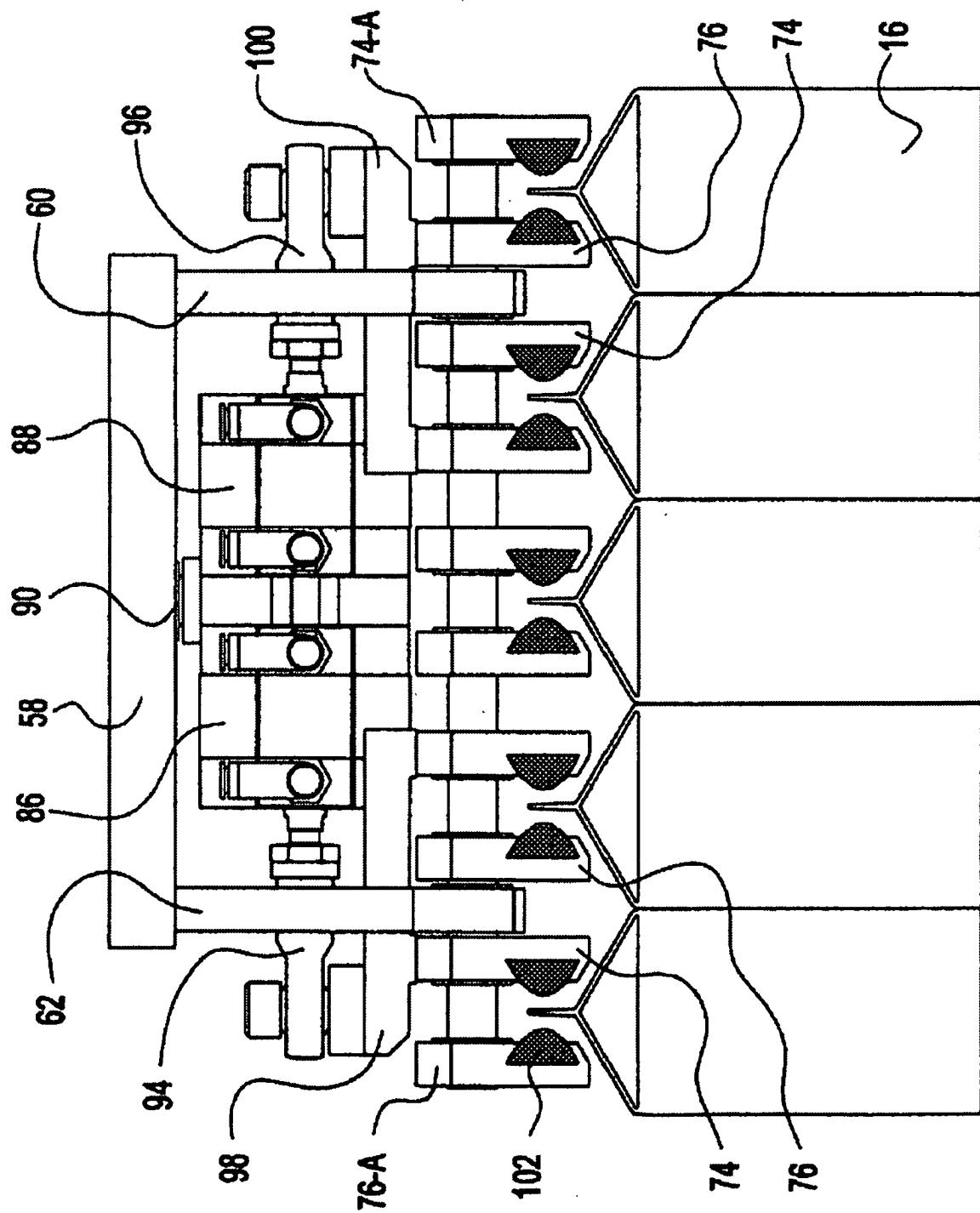
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Fig 8



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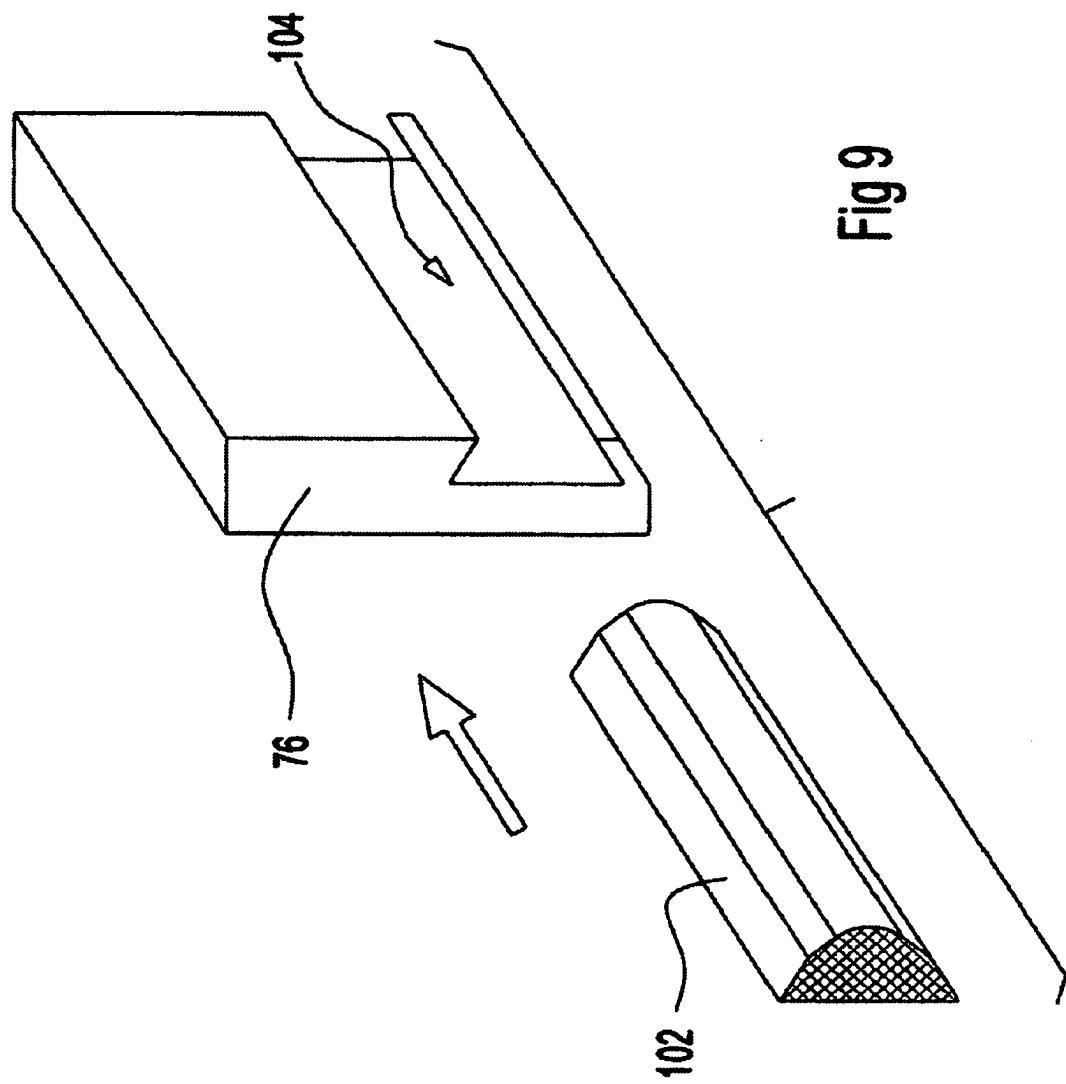


Fig 9

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